

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

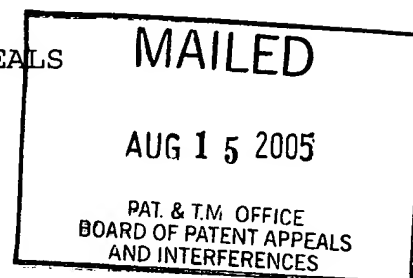
UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte KIM B. ROBERTS

Appeal No. 2005-1933
Application 09/349,087

ON BRIEF



Before HAIRSTON, KRASS, and OWENS, *Administrative Patent Judges*.
OWENS, *Administrative Patent Judge*.

DECISION ON APPEAL

This appeal is from a rejection of claims 1-10, 12-24 and 26-28. Claims 11 and 25 stand objected to but allowable if rewritten in independent form.

THE INVENTION

The appellant claims a method, synchronizer and de-synchronizer for transmitting a continuous digital signal over

a synchronous network. Claim 1, which claims the method, is illustrative:

1. A method for transmitting a continuous digital signal of an arbitrary rate R1 over a synchronous network, comprising:

selecting a fixed length container signal of a rate R, where R is higher than said arbitrary rate R1 of said continuous signal; and

at a transmit site, adaptively distributing the bits of said continuous signal into valid locations of a frame of said container signal and providing stuff bits into invalid locations,

wherein said invalid locations are uniformly interspersed across said frame.

THE REFERENCES

Upp	4,998,242	Mar. 5, 1991
Choi	5,131,013	Jul. 14, 1992
Urbansky	5,263,056	Nov. 16, 1993
Shiragaki	5,663,820	Sep. 2, 1997
Sherman et al. (Sherman)	6,047,005	Apr. 4, 2000
		(filed Jan. 7, 1998)
Cummings et al. (Cummings)	6,240,087	May 29, 2001
		(filed Mar. 31, 1998)

THE REJECTIONS

The claims stand rejected under 35 U.S.C. § 103 as follows:
claims 1-4 over Sherman; claims 5, 21-24 and 26-28 over Sherman in view of Urbansky; claims 6-10 over Sherman in view of Urbansky and Upp; claim 12 over Sherman in view of Cummings; claims 13, 16, 17, 19 and 20 over Sherman in view of Upp; claims 14 and 15

over Sherman in view of Upp and Choi; and claim 18 over Sherman in view of Upp and Shiragaki.

OPINION

We reverse the aforementioned rejections. We need to address only the independent claims, i.e., claims 1, 13, 19 and 21.

Claims 1, 13 and 19

Claim 1 requires adaptively distributing the bits of a continuous signal into valid locations of a frame of a container signal. Claim 13 claims a synchronizer for adaptively mapping a continuous format signal, including a mapping unit for adaptively inserting stuff bits and data bits into a frame of a tributary. Claim 19 claims a de-synchronizer for adaptively reverse mapping a continuous format signal.

The portion of Sherman relied upon by the examiner discloses (col. 10, lines 46-50):

A standard SONET frame includes a transport overhead field, comprising a section overhead field and a line overhead field, a path overhead field, stuffing bytes, and main portion for transmitting data (in the form of virtual tributaries or VTs).

The examiner argues that the dictionary definition of "adaptively" is "[t]o make suitable to or fit for a specific use or situation", and that "Sherman discloses the process of making

a SONET frame suitable for transmitting a T1 signal, thus it is 'adaptively' distributing the T1 bits into a SONET frame" (answer, page 16).

The definition of "adaptively" relied upon by the examiner requires that Sherman's bit insertion into the SONET frame be made suitable to or fit for Sherman's specific use or situation. Sherman, however, does not disclose any such adaptation. To the contrary, Sherman's disclosure that he is describing the standard SONET frame (col. 10, line 46) indicates that he uses the conventional bit insertion into the SONET frame.

Thus, the examiner has not established that Sherman would have fairly suggested, to one of ordinary skill in the art, the step of adaptively distributing bits required by claim 1, the capability of adaptively mapping or adaptively inserting stuff bits required by claim 13, or the capability of adaptively reverse mapping required by claim 19. Accordingly, we reverse the rejections of those claims and dependent claims 2-10, 12, 14-18 and 20.¹

Claim 21

Claim 21 requires adaptively mapping a continuous digital signal into a container signal by assigning, from a set of

¹ The examiner does not rely upon Upp, Cummings, Choi or Shiragaki for any disclosure that remedies the above-discussed deficiency in Sherman.

assignable locations in the container signal, locations to include adaptive stuff bits.

The portion of Urbansky relied upon by the examiner discloses equalizing the bit rates of plesiochronous signals using fixed stuff bits and variable stuff bits (col. 1, lines 25-50).

The examiner argues (answer, pages 6-7):

Urbansky discloses locations that comprise adaptive stuff bits (justification locations contain variable stuff bits (see column 1)). It would have been obvious to one skilled in the art at the time of the invention to utilize adaptive stuff bits, as taught in Urbansky, in the system of Sherman, because doing so would provide the SONET frame with more flexibility when transporting the lower rate tributary (i.e. the virtual tributaries can 'float' in the SPE, a method well known in the art). Furthermore, using variable stuff bits allow[s] the system to adapt to other VT groups other than VT1.5, thereby making the system of Sherman more flexible.

For a *prima facie* case of obviousness to be established, the teachings from the prior art itself must appear to have suggested the claimed subject matter to one of ordinary skill in the art. See *In re Rinehart*, 531 F.2d 1048, 1051, 189 USPQ 143, 147 (CCPA 1976). The mere fact that the prior art could be modified as proposed by the examiner is not sufficient to establish a *prima facie* case of obviousness. See *In re Fritch*, 972 F.2d 1260, 1266, 23 USPQ2d 1780, 1783 (Fed. Cir. 1992).

The examiner has not established that the increased flexibility relied upon by the examiner as the motivation to combine the teachings of Sherman and Urbansky comes from the relied upon disclosures in those references, i.e., Sherman's discussion of a standard SONET frame (col. 10, lines 46-50) and Urbansky's discussion of using variable stuff bits in equalizing the bit rates of plesiochronous signals (col. 1, lines 25-50).

The examiner, therefore, has not carried the burden of establishing a *prima facie* case of obviousness of the method claimed in claim 21. Accordingly, we reverse the rejection of that claim and claims 22-24 and 26-28 that depend directly or indirectly therefrom.

DECISION

The rejections under 35 U.S.C. § 103 of claims 1-4 over Sherman, claims 5, 21-24 and 26-28 over Sherman in view of Urbansky, claims 6-10 over Sherman in view of Urbansky and Upp, claim 12 over Sherman in view of Cummings, claims 13, 16, 17, 19 and 20 over Sherman in view of Upp, claims 14 and 15 over Sherman


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in view of Upp and Choi, and claim 18 over Sherman in view of Upp
and Shiragaki, are reversed.

REVERSED


KENNETH W. HAIRSTON
Administrative Patent Judge)


ERROL A. KRASS
Administrative Patent Judge)


TERRY J. OWENS
Administrative Patent Judge)

BOARD OF PATENT
APPEALS AND
INTERFERENCES

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